The Vision Council

After Shock and Recovery

Brian Beaulieu
CEO
Revenue Data Trends, All Divisions

In Billions of $

- RX Lenses
- Ophthalmic Frames
- Plano (Non-Rx) Sunglasses
- OTC Magnifying Readers

Source: Vision Council
# Preliminary 2016 Forecast Results

<table>
<thead>
<tr>
<th></th>
<th>Duration</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>US GDP</td>
<td>15</td>
<td>99.5%</td>
</tr>
<tr>
<td>US Ind. Prod.</td>
<td>10</td>
<td>99.8%</td>
</tr>
<tr>
<td>Eur Ind. Prod.</td>
<td>15</td>
<td>99.2%</td>
</tr>
<tr>
<td>Canada Ind Prod</td>
<td>15</td>
<td>98.5%</td>
</tr>
<tr>
<td>China Ind Prod</td>
<td>18</td>
<td>99.5%</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>18</td>
<td>97.8%</td>
</tr>
<tr>
<td>Housing</td>
<td>15</td>
<td>96.6%</td>
</tr>
<tr>
<td>Employment</td>
<td>14</td>
<td>99.6%</td>
</tr>
</tbody>
</table>

*ITR Economics provides the best economic intelligence to reduce risk and drive practical and profitable business decisions.*
US Real Gross Domestic Product to US Gross Domestic Product for Services

Source: BEA

3MMA Data Trends in Trillions of 2009 Chained Dollars
Percent of 2015 World GDP by Country

- United States: 24.5%
- China: 15.0%
- Rest of World: 67%

*Source: IMF, *67% are IMF Estimated Figures*

*Total 2015 World GDP: $73.171 Trillion, US$*
Net Migration Between States, July 2014-July 2015

Note: Does not include immigration into the U.S.

Source: William H. Frey analysis of Census estimates

DARLA CAMERON / THE WASHINGTON POST

US Industrial Production to Gross Domestic Product

Year-over-Year, Quarter-to-Quarter (3/12)
Sources: FRB, BEA
## Data Preparation

<table>
<thead>
<tr>
<th></th>
<th>Raw</th>
<th>3MMT</th>
<th>3/12</th>
<th>12MMT</th>
<th>12/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb-15</td>
<td>1.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-15</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-15</td>
<td>1.5</td>
<td>4.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May-15</td>
<td>1.4</td>
<td>4.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun-15</td>
<td>1.5</td>
<td>4.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul-15</td>
<td>1.3</td>
<td>4.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug-15</td>
<td>1.3</td>
<td>4.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep-15</td>
<td>1.6</td>
<td>4.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-15</td>
<td>1.6</td>
<td>4.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov-15</td>
<td>1.5</td>
<td>4.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec-15</td>
<td>1.7</td>
<td>4.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-16</td>
<td>1.6</td>
<td>4.8</td>
<td>18.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb-16</td>
<td>1.7</td>
<td>5.0</td>
<td>18.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-16</td>
<td>1.7</td>
<td>5.0</td>
<td>18.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-16</td>
<td>1.7</td>
<td>5.1</td>
<td>15.9%</td>
<td>18.6</td>
<td></td>
</tr>
<tr>
<td>May-16</td>
<td>1.6</td>
<td>5.0</td>
<td>13.6%</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>Jun-16</td>
<td>1.7</td>
<td>5.0</td>
<td>13.6%</td>
<td>19.0</td>
<td>26.7%</td>
</tr>
<tr>
<td>Jul-16</td>
<td>1.5</td>
<td>4.8</td>
<td>14.3%</td>
<td>19.2</td>
<td>25.5%</td>
</tr>
<tr>
<td>Aug-16</td>
<td>1.5</td>
<td>4.7</td>
<td>14.6%</td>
<td>19.4</td>
<td>25.2%</td>
</tr>
<tr>
<td>Sep-16</td>
<td>1.9</td>
<td>4.9</td>
<td>16.7%</td>
<td>19.7</td>
<td>22.4%</td>
</tr>
<tr>
<td>Oct-16</td>
<td>1.7</td>
<td>5.1</td>
<td>13.3%</td>
<td>19.8</td>
<td>20.0%</td>
</tr>
<tr>
<td>Nov-16</td>
<td>1.7</td>
<td>5.3</td>
<td>12.8%</td>
<td>20.0</td>
<td>18.3%</td>
</tr>
<tr>
<td>Dec-16</td>
<td>1.9</td>
<td>5.3</td>
<td>10.4%</td>
<td>20.2</td>
<td>15.4%</td>
</tr>
<tr>
<td>Jan-17</td>
<td>1.7</td>
<td>5.0</td>
<td>19.4%</td>
<td>20.3</td>
<td>12.7%</td>
</tr>
</tbody>
</table>

### 3/12 Rate-of-Change

\[
\text{3/12 Rate-of-Change} = \left( \frac{\text{January 2017 3MMT}}{\text{January 2016 3MMT}} \right) \times 100 - 100
\]

\[
= \frac{5.3}{4.8} \times 100 - 100 = 10.4\%
\]

### 12/12 Rate-of-Change

\[
\text{12/12 Rate-of-Change} = \left( \frac{\text{January 2017 12MMT}}{\text{January 2016 12MMT}} \right) \times 100 - 100
\]

\[
= \frac{20.3}{18.0} \times 100 - 100 = 12.7\%
\]
Revenue Rates-of-Change, All Divisions

Source: Vision Council
US Industrial Production Index to G7 Leading Indicator

Sources: FRB, OECD
US Industrial Production to ITR Leading Indicator™

Reported in *ITR Trends Report – ITR Advisor*

Sources: FRB, ITR Economics

USIP – 12/12 Indicator - Monthly

First in Forecasts Since 1948

ITR ECONOMICS
US Purchasing Managers Index

As seen in Trends Report

Source: Institute for Supply Management

1/12 Rate-of-Change
Non-Manufacturing Purchasing Managers Index

Above 50 Indicates expansion

Source: Institute for Supply Management
US Median Weekly Earnings

Source: BLS

Median Earnings - Raw Data

Dollars


$827.0

First in Forecasts Since 1948

ITR Economics

Source: BLS
US Retail Sales Excluding Gas Stations (deflated)

Source: Census Bureau

Trillions of Dollars

First in Forecasts Since 1948

ITR Economics

MMT

R-O-C

'96 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16 '18 '20

3/12 12/12

3MMT 12MMT

2.124

2.8% 2.1%
US Retail Sales Excluding Gas Stations (deflated) to US E-Commerce Retail Sales

Retail excl Gas

E-Commerce

15.6%
2.8%

12/12 Rates-of-Change
Source: Census Bureau
## Retail Sales

<table>
<thead>
<tr>
<th>Category</th>
<th>Rate of Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Merchandise Stores</td>
<td>-0.8</td>
</tr>
<tr>
<td>Automotive Parts Stores</td>
<td>0.5</td>
</tr>
<tr>
<td>Clothing Stores</td>
<td>0.8</td>
</tr>
<tr>
<td>Grocery Stores</td>
<td>2.3</td>
</tr>
<tr>
<td>Sporting Goods</td>
<td>2.4</td>
</tr>
<tr>
<td>Jewelry Stores</td>
<td>2.7</td>
</tr>
<tr>
<td>Furniture Stores</td>
<td>2.8</td>
</tr>
<tr>
<td>Beer, Wine &amp; Alcoholic Beverage</td>
<td>3.3</td>
</tr>
<tr>
<td>Light Vehicle Sales</td>
<td>3.9</td>
</tr>
<tr>
<td>Bldg Materials, Garden, Supplies</td>
<td>5.9</td>
</tr>
<tr>
<td>Health and Personal Care Stores</td>
<td>7.4</td>
</tr>
<tr>
<td>Online Retailers</td>
<td>13.6</td>
</tr>
</tbody>
</table>

Source: US Census Bureau

First in Forecasts Since 1948

12/12 Rates-of-Change
First in Forecasts Since 1948

US Recreation Expenditures to US Total Retail Sales (deflated)

Retail Sales

Recreation

12/12 Rates

-12

-8

-4

0

4

8

12

16

20

'82 '84 '86 '88 '90 '92 '94 '96 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16 '18 '20

As seen in TrendsReport

Sources: BEA, Census Bureau

2.0%

3.9%
US New Homes Sold

Source: Census Bureau

Thousands

'96 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16 '18 '20

-75 -60 -45 -30 -15 0 15 30

3/12 12/12 3MMT 12MMT

562.0

12.2% 11.5%

First in Forecasts Since 1948

ITR Economics Source: Census Bureau

Thousands
Housing Starts

As seen in Trends Report

First in Forecasts Since 1948

Source: Census Bureau

Millions of Units
Rx Lenses Revenue

Source: Vision Council
Rx Lenses Revenue

Rates-of-Change

Source: Vision Council

First in Forecasts Since 1948
Rx Lenses Revenue to Housing Starts

Sources: Vision Council, Census Bureau

12/12 Rates-of-Change
Rx Lenses Revenue to US Total Retail Sales

Sources: Vision Council, Census Bureau

12/12 Rates

- Rates of Change

Retail Sales

Sales

'S06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18

'S06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18

Sales

Retail Sales

First in Forecasts Since 1948

12/12 Rates-of-Change

Sources: Vision Council, Census Bureau
RX Lenses Revenue to Units of Rx Lenses Sold

Source: Vision Council

12/12 Rates-of-Change

2.7%
0.8%
Ophthalmic Frames Revenue

Source: Vision Council

Billions of Dollars

First in Forecasts Since 1948

Source: Vision Council
Ophthalmic Frames Revenue

Source: Vision Council

Rates of Change

-15 -10 -5 0 5 10 15 20

'06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18

3/12 12/12

0.9% 0.2%
Ophthalmic Frames Revenue to US Industrial Production Index

Sources: Vision Council, FRB

12/12 Rates-of-Change

First in Forecasts Since 1948

Sources: Vision Council, FRB
Ophthalmic Frames Revenue to US Disposable Personal Income

Sales

Income

12/12 Rates-of-Change
Sources: Vision Council, BEA
Ophthalmic Frames Revenue to Units of Ophthalmic Frames Sold

Source: Vision Council

12/12 Rates-of-Change

'06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18

Sales

Units

First in Forecasts Since 1948
Plano (Non-Rx) Sunglasses Revenue

Source: Vision Council
Plano (Non-Rx) Sunglasses Revenue

Source: Vision Council

Rates-of-Change

3/12 12/12

5.3% 3.2%
Plano (Non-Rx) Sunglasses Revenue to Units of Plano (Non-Rx) Sunglasses Sold

Source: Vision Council

12/12 Rates of Change

3.2%  0.3%
Plano (Non-Rx) Sunglasses Revenue to US Total Retail Sales (nominal $)

Sources: Vision Council, Census Bureau

12/12 Rates-of-Change

First in Forecasts Since 1948

12/12 Rates-of-Change

Sources: Vision Council, Census Bureau
OTC Magnifying Readers Revenue

Source: Vision Council

Billions of Dollars

First in Forecasts Since 1948

ITR Economics
OTC Magnifying Readers Revenue

Source: Vision Council

Rates-of-Change

First in Forecasts Since 1948

Source: Vision Council
U.S. Dependence on Foreign Oil Declining
Net imports as a share of domestic consumption

Source: Energy Information Administration
Weekly Oil Price & Rig Count

Rigs: Weekly Count
WTI: Average Weekly Price

Sources: EIA, Baker Hughes
US Consumer Price Index to US Producer Price Index

First in Forecasts Since 1948

Source: BLS
Employment – Private Sector

Private Sector Employment Growth 1.9% C
Job Openings 6.5% C
Involuntary Part Time Employment -6.7% A
Quit Rate – Falling
US Overall Wage Growth

Source: FRB Atlanta

Raw Data

Percent
Depression Drivers

- Demographics
- Inflation
- Health Care Costs / Entitlements
- US National Debt
Total U.S. Public Debt

The Long View…

First in Forecasts Since 1948

(% of GDP)
Relating to Your Business

Discuss with your management team:

- What Phase are you in now?
- What Phase are your key customer segments in?
- What can you watch for in your business to help you know if you are moving into phase X?
- If the next six months moves from X to Y, what is your plan?
- Which of your customers are likely to move into X at the same time?
- What are your plans if Phase C turns into Phase D, or it turns into Phase B?
Join our email list!

Receive monthly updates on the economy

Email updates@itreconomics.com with the subject line Vision Council